

## The impact of arbuscular mycorrhizal colonization on soil diversity indices of dill and common bean under different cropping systems

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**Abstract:**

The purpose of this work was to compare the effects of *Funneliformis mosseae* and cropping system on soil bacterial and fungal diversity indices of dill (*Anethum graveolens* L.) and common bean (*Phaseolus vulgaris* L.), grown as the sole crop or intercropped in a field factorial experiment. The factors were cropping systems including a) common bean sole cropping (40 plants m<sup>-2</sup>), b) dill sole cropping at different densities (25, 50 and 75 plants m<sup>-2</sup>) and c) the additive intercropping of dill/common bean (25/40, 50/40 and 75/40 plants m<sup>-2</sup>). All these treatments were applied with or without Arbuscular Mycorrhiza (AM) colonization. The Shannone Wiener index and Evenness index of soil bacterial and fungal community were higher in the intercropping systems than those of sole cropping systems.

**Keywords:**

*Anethum graveolens* L., Bacterial and fungal community, Cropping system, *Funneliformis mosseae*.